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REMARKS

The issues outstanding in the instant application are as follows:

- Claims 1-9, 14-17 and 19-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi et al. (U.S. Patent No. 5,902,957) in view of Gothe (U.S. Patent No. 2,018,353);
- Claims 1 and 10-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi et al. (U.S. Patent No. 5,902,957) in view of Sakuragi et al. (U.S. Patent No. 4,396,797);
- Claims 22 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakata (U.S. Patent No. 4,029,891); and
- Claims 18 and 23-25 have been objected to as being dependent upon a rejected base claim.

Applicant traverses all the outstanding objections and rejections and requests reconsideration and withdrawal thereof in light of the remarks contained herein.

35 U.S.C. § 103(a) - Takahashi in view of Gothe

Claims 1-9, 14-17, and 19-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi et al. (U.S. Patent No. 5,902,957) in view of Gothe (U.S. Patent No. 2,018,353). Takahashi shows a conductive core wire 2 surrounded by a conductive outer pipe 1 shorted to each other via a conductive shorting plate 3. Takahashi requires a "radio wave absorbing element" such as ferrite magnetic substance 7 arranged between the conductive core wire 2 and an inner wall of the conductive outer pipe 1. See Takahashi column 3 lines 15-34 and claims 1 and 7. Gothe shows a wire T surrounded by insulation beads P all inside a metal foil envelope A.

Applicant does not believe that it would have been obvious to one of ordinary skill in the art to combine the teachings of Takahashi and Gothe, and Applicant does not believe that the combined teachings of the references would have suggested to those of

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ordinary skill in the art to replace the ferrite magnetic substance 7 of Takahashi with the insulation beads P of Gothe. In order to combine the teachings of Takahashi and Gothe, the Examiner has ignored most of the text of Takahashi. See Takahashi FIG. 1, FIG. 2, FIG. 3(a), FIG. 3(b), FIG. 5(a), and FIG. 5(b), and their descriptions in column 5 line 31 to column 10 line 48. FIG. 1 points out that Takahashi seeks to deterministically absorb undesired currents I_{ii} , I_{io} , and hence I_{∞} . Starting with FIG. 2, Takahashi proposes using a ferrite magnetic substance 7 in the shape of at least one cylinder having a particular inner radius and outer radius. The cylindrical dimensions are selected based on the specific permeability and dielectric constant of the magnetic substance 7 as well as the frequency of the radio waves that are desired to be absorbed. By summarily replacing the cylindrical ferrite magnetic substance 7 with the insulation beads P of Gothe, the Examiner discards the major teachings of Takahashi. Such a combination would fail to deterministically absorb undesired currents. Note Takahashi column 7 line 59 through column 8 line 3, which contemplates stepwise changes in the radial thickness of the cylindrical magnetic substance 7 in order to maintain control over the absorption of undesired currents. Thus, it would not have been obvious to one of ordinary skill in the art to combine the teachings of Takahashi and Gothe.

Applicant reiterates that Takahashi and Gothe are at cross-purposes with each other. Applicant is not suggesting that the features of Gothe need to be bodily incorporated into the structure of Takahashi, nor is Applicant suggesting that the claimed invention must be expressly suggested in one or more of the references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA1981). Applicant is stating that modifying the rigid construction of Takahashi to make it flexible in accordance with Gothe inherently destroys Takahashi such that it is incapable of absorbing the undesired currents. Such a destruction of the teachings of Takahashi would not be obvious to one of ordinary skill in the art. See MPEP Section 2143.01, *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

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Nonetheless, and for the sake of argument, combining Takahashi and Gothe might result in insulation beads surrounding a wire inside a conductive outer pipe, but Takahashi and Gothe fail to show or suggest "a dielectric joint, coupled to the second end of the conductive sleeve, for positioning a portion of the center conductor in a middle of the second end" as recited in claim 1. The Examiner jumps to the conclusion that because a plurality of insulation beads P from Gothe could replace the ferrite magnetic substance 7 of Takahashi, that a dielectric joint is coupled to the second end of the conductive sleeve "for positioning a portion of the center conductor in a middle of the second end." In order to adjust the placement of an insulation bead P from Gothe within a conductive outer pipe 1 of Takahashi to "position a portion of the center conductor in a middle of the second end" as recited in claim 1, of the insulation bead P from Gothe would need to protrude from the conductive outer pipe 1 of Takahashi. This is suggested not by Takahashi, Gothe, or a combination of Takahashi and Gothe -- instead this is suggested by Applicant! See all the figures of the pending application. Therefore, the Examiner uses impermissible hindsight to argue for a combination of Takahashi and Gothe and the supposed results of such a combination.

Thus, claim 1 is not obvious in view of Takahashi and Gothe. Claims 2-9, 14-17, and 19-21 depend directly or indirectly upon independent claim 1 and thus are also not obvious in view of Takahashi and Gothe.

Furthermore, regarding claims 5 and 21, the insulation beads are listed in Gothe as being made of quartz, steatite, glass, porcelain, etc., which are all rigid dielectric materials. There is no motivation to use a compressible dielectric material, and no design choice evident in the cited references would lead a person to replace the rigid dielectric materials listed in Gothe with compressible dielectric materials unless (using impermissible hindsight) that person was using the dielectric material as part of a dielectric joint. The Examiner cites *In re Leshin*, 227 F.2d 197, 199, 125 USPQ 416, 419 (CCPA 1960) as supporting the contention that it would have been obvious to one of ordinary skill to choose a suitable material for the dielectric spacer of Takahashi [sic],

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either rigid or compressible. Applicant disagrees that *In re Leshin* can be used to expand the universe of rigid dielectric materials listed in *Goth* to include compressible dielectric materials absent a factual basis for such expansion. In this case, the Examiner has merely resorted to hindsight reconstruction to add compressible dielectric materials rather than from any suggestion in the applied prior art to modify *Goth*.

Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-9, 14-17, and 19-21 in view of *Takahashi* and *Goth*.

35 U.S.C. § 103(a) - *Takahashi* in view of *Sakuragi*

Claims 1 and 10-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Takahashi et al.* (U.S. Patent No. 5,902,957) in view of *Sakuragi et al.* (U.S. Patent No. 4,396,797). *Takahashi* shows a conductive core wire 2 surrounded by a conductive outer pipe 1 shorted to each other via a conductive shorting plate 3. *Takahashi* requires a "radio wave absorbing element" such as ferrite magnetic substance 7 arranged between the conductive core wire 2 and an inner wall of the conductive outer pipe 1. See *Takahashi* column 3 lines 15-34 and claims 1 and 7. *Sakuragi* shows pipes 4, 5, 6 surrounding a flexible cable 3. FIG. 6 of *Sakuragi* shows cylindrical pipes 9 surrounded by heat shrinkable tubes 10. Presumably, a flexible cable 3 can run through the opening of the cylindrical pipes 9 of FIG. 6 in *Sakuragi*. *Sakuragi* proposes these pipes 4, 5, 6, 9 to protect a flexible cable 3 from excessive bending.

The Examiner has not addressed all the limitations of claim 1 in the rejection of claims 1 and 10-13 under 35 U.S.C. § 103(a) as being unpatentable over *Takahashi* in view of *Sakuragi*. The Examiner has admitted that "*Takahashi* does not disclose . . . a dielectric joint coupled to the second end of the conductive sleeve for positioning a portion of the center conductor in a middle of the second end." The Examiner later goes on to say that, "since a plurality of spacers are provided inside the conductive sleeve of *Takahashi*, a dielectric joint (or a spacer) is coupled to the second end of the conductive sleeve, and the center conductor is located inside the spacer along a longitudinal axis of

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the tubular solid dielectric element (re claim 11)." The Examiner, however, does not state that Takahashi discloses a dielectric joint coupled to the second end of the conductive sleeve for positioning a portion of the center conductor in a middle of the second end. In fact, the cylindrical pipes 9 of Sakugari fail to position a portion of the center conductor in a middle of the second end.

Thus, claim 1 is not obvious in view of Takahashi and Sakugari. Claims 10-13 depend directly or indirectly upon independent claim 1 and thus are also not obvious in view of Takahashi and Sakugari. Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1 and 10-13 in view of Takahashi and Sakugari.

35 U.S.C. § 103(a) - Takahashi in view of Nakata

Claims 22 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakata (U.S. Patent No. 4,029,891). Nakata proposes rigid metallic main sections 11, 12, and an intermediate flexible metallic section 13 protecting a central conductor 10.

Because the sections 11, 12, 13 of Nakata are all metallic, there is no reason for any particular section to be "an odd quarter wavelength of a frequency of interest" as recited in claim 1. Any intended electrical shielding of the frequency of interest provided by any particular section would be destroyed by the fact that all of the metallic sections of Nakata are electrically connected. *In re Aller* stands for the principle that the discovery of an optimum value of a variable in a known process is normally obvious. *In re Antonie*, 559 F.2d 618, 620, 195 USPQ 6, 8-9 (CCPA 1977). Exceptions to this general rule lie in cases where the results of optimizing a variable, which was known to be result effective, were unexpectedly good or where the parameter optimized was not recognized to be a result-effective variable. *Id.*

In this case, the parameter optimized (the effective electrical length of a conductive sleeve) was not recognized to be a result-effective variable -- and could never be a result-effective variable as long as all of the sections 11, 12, 13 of Nakata are metallic. Thus, Nakata fails to show or suggest "a conductive sleeve having a first end

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and a second end and an effective electrical length equal to an odd quarter wavelength of a frequency of interest" as recited in claim 1.

Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 22 in view of Nakata.

Allowable Subject Matter

Applicant gratefully acknowledges that the Examiner has indicated that claims 18 and 23-25 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

SUMMARY

The application is in condition for allowance and a favorable response at an early date is earnestly solicited. Should the Examiner have any questions, comments, or suggestions, the Examiner is invited to contact Applicant's representative at the telephone number indicated below.

Please charge any fees associated herewith, including extension of time fees, to Deposit Account 502117.

Respectfully submitted,

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10 FEB 2005

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